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ABSTRACT

A project designed to train paraprofessional personnel (technicians) who could materially assist elementary classroom teachers in working with atypical readers is reported in two separate sections. The first section, titled "Highlights of the Reading Teaching Technician Project," describes the background, operation, dissemination, and projections of the project, which involved three institutions in a cooperative arrangement: a university that provided graduate students to train the reading technicians, a two-year technical institute that gave technicians diploma credit for their work, and the local educational agency in whose elementary reading program the technicians worked. A listing of course descriptions and requirements for both the two-year and one-year reading teaching technician program are appended to this section. The second section, titled "Project Evaluation," contains the unedited report of the project's external evaluator and a discussion of the extent to which the project met its predetermined objectives: to train the technicians, to elevate the children's reading skills, to prepare doctoral-level university students to deal with reading problems of public school administrators, and to generate a disseminatable model for such activity. The evaluator's conclusion is that an adequate training program was developed between the university and the institute with the children receiving substantial help in reading and the graduate students having extensive leadership and teaching opportunities. (BM)

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OCCUPATIONAL EDUCATION RESEARCH PROJECT FINAL REPORT

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(Public Law 90-576)

Title I - Part C - Section 131b

THE READING TEACHING TECHNICIAN

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July 31, 1977

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Occupational Research Unit
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U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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ACKNOWLEDGMENTS

As in any endeavor that involves a large number of people, it is impossible to acknowlege the contributions of everyone who contributed to the success of this project. Still, mention should be made of several contributors.

The support personnel at each of the cooperating insitutions have provided helping hands whenever needed. These include, at UNC-Greensboro, Dean David Reilly and Dr. Ernest Lee. At Guilford Technical Institute, we are indebted to Dr. Jerry Owens, Mr. Tom Slatton and Mrs. Madge Schwarz. With the Greensboro City Schools, a special thanks is owed Dr. W. J. House, Dr. Alvin Granowsky, and Mr. William Johnson. Though impractical to list by name, we also recognize that completion of the project would have been impossible without the support and cooperation of Greensboro's teachers and principals.

It is difficult to exaggerate the importance of the day-by-day effort expended by the Project's teaching assistants. These five ladies (Ann Stapleton, Sandra Gupton, Lou Ann Kasias, Judy Hall, and Muriel Lundy) all performed well beyond what anyone had a right to expect.

Dr. David Kingsley, the projector's evaluator, is to be thanked for his patience as well as for his conscientious evaluation on the work.

Mr. Danny Simmons and Dr. Charles Rogers of the Occupational Research Unit provided invaluable institutional, fiscal, and moral support.

Finally, we are in the debt of those twenty-seven diligent students who remained with us for the entire training period. Their

ability to work smoothly and intelligently under a tremendous variety of conditions deserves mention. For this, the Project owes a very special note of thanks.

Project Director

University of North Carolina at Greensboro

PREFACE

The Reading Teaching Technician (RTT) Project grew out of a series of conversations initiated in the Summer of 1974. It was felt that the State could profit from a combination effort directed at the elementary school child who was not reading as well as one might expect.

Included in the preliminary thinking was the notion that, in these times of fiscal constraint, one can not build a school curriculum which relies entirely upon college/university graduates. The emerging body of literature indicated that paraprofessional or aide or technician assistance seemed to accelerate school achievement. Thus, the Project intended to train personnel who could materially assist classroom teachers in working with atypical readers.

A second component of this early thinking centered upon the use of graduate teaching assistants. These personnel are often among the most talented of educators and, still, the cost of employment remains minimal when compared to what one of equal ability might earn as a "regular" employee. We also viewed the teaching experience as one which would expose the graduate students to a variety of school settings. This, it was hoped, would better prepare potential decision makers for entry into positions of responsibility within the public schools.

With the approval of the State Board of Education and the support of the Occupational Research Unit, the project began operation in the summer of 1975. The funding period extended over two calendar years and made possible the training of two separate classes of RTT's. During the second year of funding, the first class was employed by the Greensboro Public Schools while an additional class worked toward completion of its training program.

It is with considerable pride that the Project can point to the fruits of its dissemination effort. As the funded RTT training comes to a close, we see evidence of similar work emerging at a number of training institutions both within and without the State. This replication may be our highest compliment.

As one reads through the following report, it should be kept in mind that the title of "technician" is open to clarification. The Project viewed such persons as thoroughly trained individuals who are prepared to assist with inschool instruction. One with this level of professional preparation is variously described in the literature as teaching assistant, helping teacher, trained aide, assistant teacher, etc., etc., etc.. We simply use the term "technician" to indicate one trained to deal with the technical aspects of teaching, in this case, reading.

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INTRODUCTION

This report consists of two rather separate sections. The first, titled Highlights of the Reading Teaching Technician Project, will concern itself with the background, operation, and projections of the Project. A second section, titled Project Evaluation, will be the unedited report of the Project's external evaluator. It is in this portion where a discussion is made of the extent to which the Project met its predetermined objectives.

The separation described above was chosen for several reasons. First, a number of rather vital outcomes of the Project do not lend themselves to simple quantification. For example, decisions about where Project materials would be purchased were arrived at after a period of negotiation. It was felt that matters of this nature were better lent to elaboration in a narrative.

Second, a considerably important element of the Project was/is the model through which instruction and supervision has been provided. Discussion of some aspects of this model makes it difficult to provide numberical data and, hence, formal evaluation of its effectiveness.

Third, the experiences of Project participants have contributed to a number of "feelings" about the nature of the Project's work as well as the future of paraprofessionalism in general. Since many of these inklings extend beyond the bounds of the Project, it was deemed inappropriate to include these in a formal evaluation.

Finally, when the Project received its funding a dissemination function was built into the contract. In addition to the abstracts made available for mailing from the Occupational Research Unit, the Project was able to distribute and share information with a number of professional groups and agencies. This work is described in the first section of the report.

Highlights of the Reading Technician

THE MODEL

The RTT project has relied upon the cooperation of three educational agencies. Each of the three (University of North Carolina at Greensboro, Guilford Technical Institute, and the Greensboro City Schools) are publicly supported institutions involved with the training and/or utilization of school personnel.

The Project attempted to focus the resources of each agency upon the common goal of reducing reading failure among public elementary school children. During its operation, the Project has allocated a number of functions to each of the operating partners.

The University

The University of North Carolina at Greensboro provided graduate students for work within the reading education portion of the Project. These students were primarily responsible for the delivery of the professional education coursework. This service included the planning, presentation, and evaluation of in-class instruction as well as field supervision of the RTT's in training.

The University also provided the Project's director in the form of a faculty member released one quarter time to devote energies to the RTT Project. It was felt, in the Project's planning stages, the University was the appropriate agency to supply such a director. This decision was based, in part, upon the more flexible nature of many university positions.

The University also entered into an active program of recruitment to staff the graduate teaching assistantships. From the onset it became apparent that such staffing would be critical to the development of the role of an RTT.

Finally, the University secured the services of secretarial help to process budgetary materials, provide clerical and typing assistance, and clear the ordering of instructional materials. (The precise nature of these materials was decided by a combination of RTT preference, decisions of the LEA, and suggestions from the Project's teaching assistants.)

The University made available its extensive holding of children's instructional materials. These materials, as well as a modern laboratory for the design and production of audio-visual teaching devices, were seen as a distinct assets that should be made available to the Project participants. Several RTT classes met each year on the University's campus.

The Two Year Institution (TYI)

Guilford Technical Institute provided a diploma program to encompass, in an experimental manner, the RTTs. While unique in many ways (funding through the University of some teaching adjuncts, extensive field supervision/experiences, a University director, etc.), most characteristics of a TYI program remained.

The TYI provided the services of an on-staff administrator to coordinate the RTT coursework and to serve as liaison with the project. This person, acquainted with the Project from its inception, was able to assist with field supervision, provide administrative support within the TYI as needs for such support arose, and counsel students as they evidenced personal needs.

The TYI permitted the RTT program to proceed administratively in the same vein as other TYI curriculum offerings. That is, the RTTs were screened, admitted, processed, and diplomaed using what is essentially the "normal" procedures of the TYI. Guilford Technical Institute

provided all of the support services necessary to execute these functions. The Project's students were, in fact, students of the TYI.

The TYI provided the "core" or "non-professional" coursework which constituted approximately one third of the training program. In most instances, this classwork was delegated to persons upon whom the TYI relies for teaching in other programs. Included in the "core" work were such studies as Child Development, fundamentals of English, English composition, etc..

Each RTT accepted into the program for the second year was individually interviewed by the staff of the TYI. This interview process was somewhat curtailed (although considered valuable) during year one as final funding was announced much nearer the time when the program was to begin.

The Local Educational Agency (LEA)

The Greensboro City Schools provided practica sites for the field work of the RTTs in training. In the original intent of the Project was the notion of supplying extra assistance for reading problems in those schools not receiving additional Federal monies, (E. S. E. A. Title I). From the standpoint of the LEA, the Project was seen as an opportunity to aid those children for whom other support services were minimal.

The LEA, through its teachers and principal, provided an in-school station or room in which the RTTs were to train. Each school involved in the training program was able to support the RTT's efforts with instructional supplies as well as consumable materials.

The LEA served as the agency to identify children in need of tutoring assistance and supplied these students for the RTTs. The

identification process varied from school to school but, in all instances, decisions to include children were left to LEA personnel. The only guideline provided by the Project staff was that "children be included if there was reason to believe they might profit from the experience." This did not rule out the possibility of an RTT dealing with children at or above grade level in reading achievement. Still, few children of the latter type were selected for participation.

The LEA also participated by making available results of the Cooperative Test of Basic Skills during the Program's evaluation.

The Advantages

As discussed earlier, each of the cooperating agencies invested resources in a fashion convenient for each. In the process these agencies all surrendered a modicum of autonomy in return for an experimental examination of how to deal with atypical readers.

The advantages to the University are apparent. The University was able to provide training opportunities not generally available to graduate teaching assistants. The graduate students in training were exposed to a wider variety of physical facilities, instructional materials, and educational personnel than one encounters in public education. We see this exposure as vital to the education of a competent M.Ed. or Ed.D. reading professor who aspires to positions of decision making.

The University, as an institution, was able to remain in constant contact with the other cooperating agencies. This involvement was facilitated by the Project and provided on-campus personnel with an additional exposure to the workings of both the LEA and the TYI.

Finally, the University (and the TYI and the LEA) were provided with a body of evidence upon which future training/employment efforts may be based. The research initiated as the Project's evaluation can have considerable influence upon the ways in which future training of teachers and technicians may develop.

The TYI was able to sustain a new, one-year diploma program. This Reading Teaching Technician program provided the TYI with additional student enrollments and heightened visibility within the community.

The TYI was also provided with trained instructors to supplement the existing teaching staff. These educators (teaching assistants from the University) were able to assume much of the additional responsibility for designing, teaching and evaluating TYI coursework.

The TYI was able to explore the feasibility of a reading technician or teaching assistant program during the two years of the Project's operation. Unlike the beginning of many educational programs, the TYI has been able to identify the potential market for such a program, explore employment opportunities for graduates, and anticipate areas which will require particular attention should the RTT program become a permanent TYI curriculum.

The LEA was able to provide small group instruction in a number of schools where such assistance was not formerly available. Each of the RTTs trained by the Project became responsible for approximately twenty-five youngsters as they entered their internship quarter. During this time, the RTT was required to maintain school hours during four days each week. At this time the RTTs worked intensively with small groups of LEA students.

The Project was also able to purchase a considerable amount of instructional material for use within the LEA training sites. These materials remain for the individual schools to use during subsequent academic years.

The LEA, and other local school systems, have been provided with a nucleus of educators trained to function in a supportive or aide role. As the State's Primary Reading Program expands, this type of trained assistance should prove of value to the LEA.

Finally, history and certification mechanisms dictate that the LEA secure graduates from the universities. The Project anticipates that those students who served the project as teaching assistants will be much better prepared to provide substantive leadership once their study is completed.

The Pitfalls

The RTT Project as conducted over the academic years of 1975-76 and 1976-77 became one of the most labor intensive curricula of its kind. This simple fact, perhaps more than any other, contributed to the Project's difficulities. RTT students were required to devote more time to study than one might expect of a full-time undergraduate student. The combination of preparation, teaching, supervising, and counseling required more than twice the clock hours contracted for with the teaching assistants. The administrative work often demanded a full-time director rather than the one-quarter time allocated to this function. The processing of new program students (the RTTs) placed demands upon the TYI support functions without providing for these additional services.

As with many externally funded endeavors, the shortness of time between allocation of funds and inception of project work caused some initial discomfort. In our case the Occupational Research Unit was admittedly functioning in a restrictive fiscal environment. The Unit's timetable generally permits very generous start-up times.

The location of the director at the University caused some problems and seemed to divide the loyalties of those studying as RTTs. Although most of the awkardness of directing a TYI program from a University office resolved itself, the administrative control might have been better placed with the instructional program.

Coordination of the Project's three agencies improved with year two but still left much to be desired. The second year of the RTT program saw more meetings of Project staff to plan, evaluate, and articulate emotions. Yet, it is in this area where considerable improvement can be made in future efforts. Perhaps such improvement will result from a recognition that the simple time required to complete all work related to an RTT type is extensive. This area of concern should abate with more adequate staffing.

Finally, a more serious concern (which may seem quite petty) plagued the project from its onset. The definition of a role or model or title for the RTT students proved no mean task. We were caught with resolution of the following dilemma:

1. Technicians are trained
2. Aides are often not trained
3. Teachers are trained
4. Then, what is a trained aide or technician?

The identification of a niche in which the RTTs could be expected to function created difficulties for all concerned. The schools, the RTT

students, and Project personnel wrestled with the distinction for two full years. Although it may seem like a simple matter of semantics, we discovered that anxiety with respect to clearly grasping what might be expected of a technician was considerable.

Where to Next

A number of the Project's activities worked smoothly and much as they were planned. The following is provided as a listing of those items that we suggest considering if one plans to provide a similar training program.

1. For maximum student benefit, adequate staffing should be provided. One must recognize, in advance, that the elaborate field supervision and coursework related to a new offering dictates more staff than a similar "liberal arts" curriculum.
2. A strong advisory board should be created to oversee both program implementation and on-going evaluation. (We emphasize the word strong here because, in many instances, such advisory panels become after-the-fact audiences for work already completed. We urge the active and regular participation of the TYI, LEA, and University representatives. It is only through this avenue that the RTT program can build from immediate local needs and provide the most meaningful assistance for local children.) Wilson County (NC) Technical Institute might provide a vivid example of how this may be initiated.
3. Director should be housed at the institution providing the majority of the coursework. In nearly all instances this will mean at the TYI.

4. Efforts should be made to retain teaching assistants (through the underwriting of graduate assistantships at a cooperating university) to work with the RPTs in training. As mentioned earlier, these people bring skills and abilities that may be difficult to recruit elsewhere. They are cost effective. They tend to develop (perhaps over develop) a dedication and loyalty seldom present among adjunct personnel.

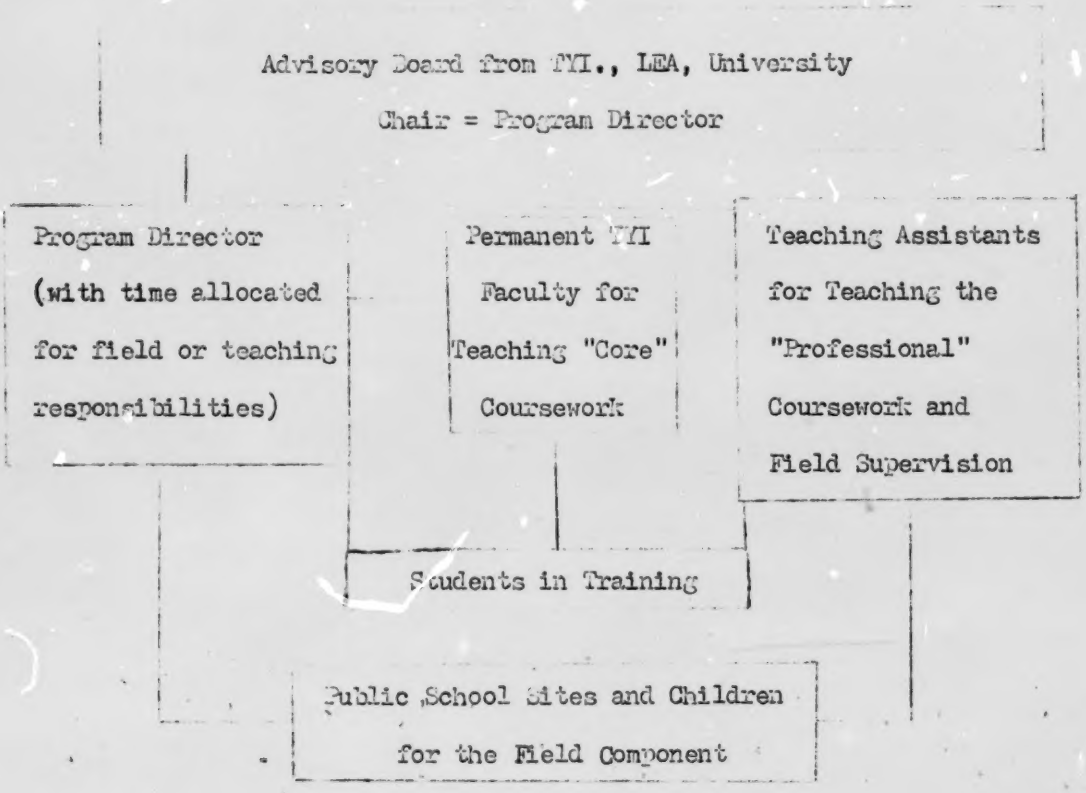
5. Consider extending the training period to two years without doubling the intensity of the coursework. Our graduates felt that it might be necessary to continue another year and permit "things to fall into place." (Appendix includes an outline of such a two year program devised by Central Carolina Technical Institute, Wilson Technical Institute, and Project personnel.)

6. Admit more students than you plan to graduate or the program requires to be self supporting. Our attrition rate of 30%-40% seems typical of similar paraprofessional efforts in other parts of the country. One might depend upon losing at least one quarter of the initial student body.

7. Consider working with agencies of the State to clarify such matters as role definition, job title, and certification.

Many of the personnel and coordination problems might be eliminated with the appointment of a full-time director. If properly functioning, the strong advisory board should move the curriculum away from some of the communication problems we experienced.

The formal structure of what the Project is suggesting might be best described with the following diagram.


Advisory Board from TTI., LEA, University
Chair = Program Director
Program Director
(with time allocated
for field or teaching
responsibilities)
Permanent TTI
Faculty for
Teaching "Core"
Coursework
Teaching Assistants
for Teaching the
"Professional"
Coursework and
Field Supervision
Students in Training
Public School Sites and Children
for the Field Component

THE STUDENTS

The Project found a number of characteristics exhibited by our student bodies. In nearly every instance, the qualities mentioned below should be considered positive.

The level of maturity present among our students was considerably above what one might expect from a cross section of TYI students. Many of our RTTs had raised children and were familiar with the workings of an elementary school.

All RTTs were from the immediate locale. This made it difficult for the Project to respond to placement requests from other parts of the State. Still, the knowledge of local bureaucracies, local resources, and local problems may have made it a bit easier to face and understand their local children.

All RTTs exhibited a genuine concern for children and the ways in which children read. Concurrently, they specifically sought the position of "technician" or instructional assistant. In doing so, they evidenced a commitment to "aiding" that is often not present among those helping others to teach. (It has been our experience that few persons are willing to undergo a year's training to work in the capacity of a para-professional. We have also experienced the unsatisfactory performance of some who are employed as "aides" but actually seek a teaching position.) The commitment to helping or aiding or being a technician is not to be overlooked.

There was considerable conversation among the Project's staff about the concientious nature of nearly every participant. It seemed, at times, that the desire to perform well bordered upon compulsivity.

The typical RTT student was not content to "get by" with either the course-work or practica. This may be a reflection of the maturity mentioned earlier and may have measurable contributed to the next observation.

Attrition was much higher than one would predict for a University of TTI based curriculum. The most frequent explanation for this, offered by the RTT students, centered upon the "lack of time." Many RTTs had established life styles which included time for spouse, children, and self. Squeezing additional hours for classwork and study (in many cases an additional forty hours each week) simply became impossible. It is unfortunate that several of our more promising students were also those most deeply involved with other activities. (This rate of attrition seems typical of the type of training and age levels of the participants. Other reported training efforts generally mention a drop out rate similar to the RTTs.)

THE TRAINING

The RTT Project, as provided during the years of 1975-77, included two cycles of students through a single year training program. The fundamental framework of the RTT program remained unchanged from year to year. That is, each class of RTT students moved through the same series of courses.

The outline of course titles and hours required for completion may be seen in Appendix II. A closer look will reveal that, in general, the curriculum may be divided into three separate components.

First, approximately one third of the RTT training program was devoted to what may be described as "core" or general coursework. These courses (including English Composition, Fundamentals of Grammar,

Child Development, etc.) were taught by faculty retained directly by the TYI. In most instances these courses were the same as offerings provided for other TYI students in non-RTT programs.

Second, an additional third of the RTT Program relied upon the so-called professional coursework. These courses were related directly to the teaching of children to read. It was this body of in-class work (Methods, Materials, and Techniques of Reading, Seminar in Reading, Supervised Internship in Reading, etc.) that was taught by the graduate teaching assistants. The RTTs were the only students enrolled in such classes.

The final third of the RTTs formal preparation was the laboratory or internship work within the public schools. Here, again, the graduate teaching assistants assumed a majority of the responsibility for supervision of the field experience. During both years of the Project, the University and TYI contributed personnel to assist with the burden of supervision. (It must be added that, as the RTTs worked through practica experiences in the schools, much meaningful assistance was provided by individual building principals and teachers. Each RTT was assured of a minimum of one hour per week of supervision by the Project staff. During the Spring Quarter, as the RTTs moved into the public schools for four working days per week, the additional aid of building principals and teachers became invaluable.)

Included at the end of this document (Appendix I) is a course description and tentative program for the RTT program expanded into a two year offering. This expansion is scheduled to begin operation at Central Carolina (NC) Technical Institute and Guilford (NC) Technical

Institue in the autumn of 1977. The decision to extend coursework over a two year period depended upon: a.) the desire to award a degree rather than a diploma at the completion of RTT work, and; b.) the expressed wishes of students currently in the RTT program to provide more "time" for integration of coursework into field work.

It should be noted, as one views Appendix I, that the two year offering provides coursework in typing, first aid, community relations, and the like. It is the feeling of the TYIs involved and the Project staff that such work will prepare an aide or technician that is more versatile than the current RTTs.

In this day when the teaching of the State's citizens to read is a paramount concern, one facet of the RTT training should be emphasised. Typical B.A. programs preparing elementary school teachers require approximately one hundred clock hours of preparation for the teaching of reading; B.S. programs perhaps twice that. The RTT Program, when considering both in class and in field work, requires approximately eight hundred such clock hours. This is not to claim that sheer time devoted to the effort may be directly equated with excellence. Rather, the comparison should serve to highlight the possibility of very intensive and comprehensive preparation as a component of RTT-type educational programs.

APPENDIX I

COURSE DESCRIPTIONS

	Hours Per Week		Quarter Hours
	Class	Lab	Credit
T-BUS 102 Typewriting I (Beginning Typewriting)	2	3	3

Introduction to the touch typewriter system with emphasis on building proper techniques, mastery of the keyboard, typing personal letters and postal cards and tabulation. Upon completion of the course the student will be able to type 30 words per minute for three minutes.

T-EDU 115 Language Arts for Children (Elementary Curriculum II)	3	0	3

Study of state adopted textbooks and other media in reading, handwriting, spelling and language. Reading skills: word attack, comprehension, rate and language usage will be emphasized. Exercises to develop better listening skills will be provided. The student will collect a resource file of games and activities designed to strengthen the Language Arts program.

T-EDU 203 Exceptional Child	3	0	3

The study of children with developmental variations. Consideration is given to recognition of problems, community resources and selection of appropriate activities for the child with exceptional mental or physical development.

T-EDU 234 Audiovisual Instruction	3	3	4

The scope of the course will include practical consideration involved in selecting, using and evaluating the use of educational media to be found in schools today. Experiences in the operation and proper care of audio-visual equipment and materials will be provided. The preparation of inexpensive, teacher-student made audiovisual material will also be stressed. Examples will be drawn from all subject fields and from all elementary levels of instruction.

T-ENG 101 Grammar	3	0	3

Designed to aid the student in the improvement of self-expression through writing. Emphasis is on grammar, diction, sentence structure, punctuation and spelling. It is intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life.

T-ENG 102 Grammar	3	0	3

English Composition is designed to aid the student in improvement of self-expression by means of practical application in business and technical writing. Emphasis is on writing sentences, paragraphs and compositions.

	Hours Per Week		Quarter Hours
	Class	Lab	Credit
T-ENG 204 Oral Communication	3	0	3

The principles, techniques and practical applications of communicating the thoughts and personality through the voice and visible action of the individual to one or more persons for the purpose of achieving a previously determined response. Areas covered vary according to class needs, but in general, include: basic concepts, nonverbal language, vocal usage, speech preparation (analyzing audience and occasion, determining purpose, selecting and narrowing subject, gathering and organizing material, wording and practicing aloud) and effective listening.

T-ENG 217 Children's Literature	3	0	3

A study of children's literature which includes the history and the various types of literature appropriate for young children. Evaluation of modern writers, illustrators and books will be emphasized.

T-HEA 101 Personal Hygiene and Health	2	0	2

Study of influences on physical and mental health, individual practices which aid in maintaining good physical and mental health throughout the life span and responsibilities of those working with young children to maintain personal health and to serve as models for health practices.

T-HEA 119 First Aid	2	0	2

This course is designed to prepare a student for certification by the American Red Cross in first aid. Course will cover those areas pertinent to first aid needs for personnel in the field of criminal justice--protective service.

T-PSY 102 General Psychology I	5	0	5

A study of the various fields of psychology; the developmental process; motivation; emotion; frustration and adjustment; mental health; attention and perception; problems of group living. Attention is given to application of these topics to problems of study, self-understanding, and adjustment to the demands of society.

T PSY 115 Human Growth and Development	3	0	3

A study of the psychological and biological factors that affect the mother and child during the prenatal period.

T-SOC 101 Introduction to Sociology	5	0	5

This course involves a general survey of the field of sociology. It also examines major sociological concepts of the disciplines; differentiates sociology from other disciplines; and surveys such substantive topics as culture, personality, social stratification, institutions, community, social problems, and other major areas of sociological concern.

	Hours Per Week		Quarter Hours
	Class	Lab	Credit
T-SOC 100 Community Resources	3	0	3

A study of the resource and service agencies in the community that may be used as a supportive service to industry, education and other human service institutions. A practicum experience is closely correlated with classroom activities so that students may apply knowledge and skills to an on-the-job learning situation

T-SOC 215 Interpersonal Relationships and Communications	3	0	3

A basic course dealing with interpersonal and communication skills utilized in helping relationships. Examination is made of barriers which prohibit communication and hamper the helping process. The student will learn techniques of interviewing for specific purposes and acquire abilities in working with people.

RED 101 Introduction to Reading Education 3 3 4

An initial exposure to the role of a teaching assistant with particular emphasis upon assisting with public school reading programs. The student will study such issues as the relationship among school personnel, professional work behaviour, home-school cooperation, etc. Laboratory experiences will center upon structured observation with a variety of reading teaching settings.

RED 102 Methods, Materials, and Techniques of Teaching Reading I 5 6 7

An overview of the major approaches to the teaching of children/adults to read. A major emphasis will be the study and utilization of materials actually found in the laboratory setting. Additional stress will be placed upon the acquisition of the vocabulary specific to reading education and to the piloting of reading lessons with small groups of school children

RED 103 Methods, Materials, and Techniques of Teaching Reading II 5 6 7

Guided practice in the preparation of reading lessons, small group instruction, and evaluation of instruction. Students will be encouraged to develop teaching materials and identify teaching strategies that work well with children. An in-depth examination of the reading process and strategies for individualization will be included along with some group reading achievement tests.
Pr: Red 102

RED 201 Organization and Administration of Reading Centers 3 3 4

An opportunity to study a variety of school and community based organizations which deal with the teaching of persons to read. The operation of reading laboratories, diagnostic clinics, social service agencies, etc. will be examined as they relate to teaching reading. Some off campus work with children and adults will be required.

RED 202 Evaluation of Reading Programs, Teaching Materials, and Achievement Tests 4 3 5

A study of the formal and informal methods of assessing pupil growth in reading. The course will also touch upon those other areas of educational evaluation that parallel reading assessment. Students will acquire a systematic method of evaluating instructional materials. Attention will be devoted to role of the Teaching Technician within a school-wide reading program and a school or system-wide scheme of pupil assessment.

RED 203 Reading in the Content Areas 3 6 5

An exploration of the role of reading abilities in mastering content (mathematics, science, social studies, etc.) material. The student will be required to translate knowledge of reading and the reading process into lessons designed to teach "content." It is expected that the student will rely, in a large measure, upon the non-reading text books of the laboratory school for in-class work.

RED 204 Seminar and Practicum in Reading Education I 2 6 4

A guided field experience designed to implement earlier coursework. The student will be required to provide instruction in reading to small groups of children. Direct supervision and weekly discussion of the Technician's progress will be a feature of the course. It is expected that the student will actively participate in the seminar under the guidance of a faculty member.

RED 205 Seminar and Practicum in Reading Education II 2 6 4

An extension of RED 204. Specific attention will be devoted to assessing the extent to which the Technician can integrate concurrent coursework in Human Interaction and Content Reading into reading instruction. Weekly seminars will center upon community and school influences for the evolution of the teaching of reading. Seminar topics will also be drawn from the Technician's laboratory work during the previous week.
PR: RED 204

RED 206 Supervised Internship in Reading Education 4 30 14

A course designed to meet in the laboratory setting for four complete days each week. The Technician will be expected to demonstrate those competencies acquired during the program's earlier coursework. On-going supervision of the Technician will center upon techniques for incorporating knowledge of children, reading, the community and the school into a coherent instructional program of reading education. In addition to individual and small-group teaching, the Technician will be expected to provide some large-group instruction.
PR: RED 103 and 205

APPENDIX II

Reading Teaching Technician Program - One Year
(UNC-Greensboro and Guilford Technical Institute)

		lecture	lab	credit(s)
First Term:				
ENG 101	Fundamentals of English	3	0	3
EDU 131	Methods, Materials, Techniques of Teaching Reading - I	3	3	4
PSY 121	Child Development	3	0	3
EDU 132	Children's Literature	3	0	3
EDU 126	Seminar in Reading Education	2	3	3
				16
Second Term:				
EDU 133	Methods, Materials, Techniques of Teaching Reading - II	3	3	4
ENG 102	English Composition	3	0	3
EDU 134	Evaluation of Reading Programs, Materials, and Achievement	3	0	3
EDU 135	Production and Utilization of Audio-Visual Materials	3	3	4
EDU 127	Seminar in Reading Education	2	3	3
				17
Third Term:				
EDU 106	Language Arts for Children	3	0	3
EDU 136	Supervised Internship in Reading Education	2	30	12
				15
Fourth Term:				
EDU 137	Math and Science for Children	2	3	3
PSY 107	The Exceptional Child	3	0	3
PSY 109	Human Interaction	3	0	3
EDU 138	Seminar in Reading Education	2	3	3
Elective in Social Science		x	x	3
				15

THE DISSEMINATION

Dissemination of the RTT Project began during the second quarter of operation (February, 1976) and continues at this time. As time passed and weakness in the RTT structure became more apparent, more valid information could be made generally available. It was not until June of 1977 that the Project could make available the quantifiable information usually associated with a research effort. Still, the range and scope of agencies that received information for the RTT project is extensive.

What follows is a chronology of Project dissemination work.

February, 1976 - Project presented by invitation at the International Reading Associations's Southeastern Regional Conference, Jacksonville, Florida.

April 19, 1976 - Project presented to the Occupational Education Research Conference, Greensboro, N. C.

June, 1976 - Copies of proposal and information printed to date made available to the University of Texas at San Antonio, San Antonio, Texas.

February, 1977 - Project presented to the National Association of Alternatives in Teacher Education, Atlanta, Georgia.

February, 1977 - Project presented to members of the National Association of Colleges for Teacher Education, Chicago, Illinois.

March, 1977 - Project presented to representatives of the Niagara Falls Public Schools, Niagara Falls, New York.

May, 1977 - Project presented to the Occupational Education Research Conference, Greensboro, North Carolina.

June, 1977 - Project presented to Community College Conference in Winston-Salem, North Carolina.

In addition to some of the more formal presentations, a number of other agencies requested either assistance from Project staff or additional information about the Project. Most of this activity occurred during the winter and spring of 1977 as institutions began to plan for academic 1977-78.

Wilson County (NC) Technical Institute and Central Carolina (NC) Technical Institute combined steering committees to plan for a program similar to the RTT effort. The result of these efforts will be a two year degree program which parallels Appendix I to begin operation in autumn, 1977 at Central Carolina.

Guilford (NC) Technical Institute plans, as of this writing, to teaching assistant-reading program to its offerings for the autumn of 1977.

Various other agencies in the State contacted the Project for information and assistance. Since the physical housing of Project personnel was disparate, a precise and exhaustive listing of such contacts is impossible to assemble. Still, the following institutions must be numbered among those seeking RTT information: Beaufort (NC) Technical Institute, Piedmont (NC) Technical Institute, Central Piedmont (NC) Technical Institute.

In brief, the RTT program has received considerable attention. It is interesting to reflect upon some of the reactions encountered by Project staff. One agency, in the throes of dismissing tenured teachers, saw the RTT as an avenue to conserve funds while the local teacher's union

was adament against such an employee. College officials saw RTT-type offerings as an opportunity to enlarge the amount of graduate assistantship monies. Several potentially cooperative school systems saw the surplus of trained teachers as large enough to absorb many of the RTT functions.

THE FUTURE

The project staff has spent a considerable amount of time pondering the future of school support personnel with less than an earned bachelor's degree. This wondering became a direct outgrowth of the RTT project but often extended itself to include other, non-reading types of public school employees. A number of facts and needs have become apparent to the staff as we worked our way through 1975-76 and 1976-77.

Specifically related to the RTT Program, several findings might provide insight for future work in the State. We discovered that our RTTs, trained to provide reading instruction, were least effective with first grade students. One explanation for this may be that in grade one many children are simply not prepared to begin this thing called reading. Careful thought might be devoted to extended readiness work rather than formal reading instruction for those first graders who seem to lag. This, we feel, could influence both the training and the work of Primary Reading Program personnel.

Much of the variability among children tested for the RTT program can be traced to teacher rather than method or material or environment of instruction. This is neither surprising nor revealing. What one might begin to examine is a program of training and recruitment of paraprofessionals that is partially based upon affective characteristics of the applicant.

We are confident that the Project has demonstrated that often competing agencies can concentrate resources upon a problem of common concern. Those associated with the RTT endeavor never quite comfortable with a lack of absolute control. In days of lengthening accountability and shortening resources, we might consider such shared ventures more frequently than we have in the past.

Finally, the notion of supporting a trained teacher is neither unique nor new. Some of the earliest formal educations relied upon the services of "monitors" for supplimentation of classroom instruction. What is new may be the extent to which public education has come to rely upon the efforts of aides or monitors or helping teachers or teacher helpers or technicians or . . . .

The massive entry into education by the Federal government during the late 1950's seems to have provided the current empitus for para-professional employment. Quite suddenly, monies were made available to employ a goodly number of assistants for both clerical and educational duties. Within our State this reliance upon non-bachelor degree holders has mushroomed in recent years to the point where 1977-78 will see over 12,000 such persons in our schools.

It is unfortunate that support and assurance services have not kept pace with the expansion of this segment of the State's job market. North Carolina, unlike a number of other states, has managed to include para-professionals under the umbrella of its state education law. Such action, during the early 1970s is an admirable first step. It is now that the State must come to grips with such items as a carefully considered job description, differentiated levels of employment among our 12,000 minimal

standards for entry into what is rapidly becoming a profession, and recognition, by means of some standardized salary, that the services provided by these persons is important.

We have grown to the point where decisions about what is expected of a teacher (instructing in the arts, the sciences, communication, etc.) is a matter of simple convention wisdom. The average adult, having experienced a number of teachers in his/her life, seems to have acquired something of a Gesthalt for what makes a teacher and what a teacher should do. No such conventional wisdom extends into the realm now populated by paraprofessional employees. Both they and their employers seem uneasy when asked to carefully outline the functions of an aide or helper. Do we include or exclude clerical functions? Do we permit direct and unsupervised work with children? Do we certificate or classify?

It now seems the time to address such questions in North Carolina. The State's Primary Reading Program promises to further swell the ranks of the paraprofessional. The pressure to supply special services to special children (via P.L. 94-142) threatens to do the same. The increasing volume of literature which indicates the effectiveness of paraprofessionals may further increase numbers. For all of these reasons, now, and not tomorrow, seems the best time to face the decisions that must be made with respect to paraprofessionals. Abdication of the responsibility to make such decisions may well result in this group of 12,000 or 15,000 or 20,000 not being utilized most effectively.

Evaluation Report

Occupational Education Research Project:

Reading Teaching Technicians: An Interagency

Proposal for Dealing with Reading Instruction

in the Public Schools

Director: Dr. Patrick M. Mattern

U.C-Greensboro

Submitted: June 29, 1977

By: David C. Kingsley

Reading Teaching Technician (RTT)

I. Introduction

The project, "Reading Teaching Technician: An Interagency Proposal for Dealing with Reading Instruction in the Public School," was conceived to help meet the changing needs for reading instruction in the public schools. Whatever the causes, increasing numbers of our school children are not learning to read. A recent study done for HEW indicates that 5% of our children, age 12-17, are illiterate, and in the south the in-school illiteracy rate is 9.9%. In North Carolina, the 1972 State Assessment of Educational Progress showed that third grade children were five to six months below national norms, and six to seven months behind at the sixth grade level. On the adult level, 100,000 North Carolinians cannot take the regular written portion of the driver's license examination because they are not able to read well enough. Clearly there is a problem.

The basic premise of this project is that non-degree people, to be called Reading Teaching Technicians (RTT's), can be trained to assist in solving the instructional aspect of the reading problem with as much expertise as four-year degree people would normally bring to this task. This would be accomplished by combining the resources of a public school system, a two year institution, and a university. Intensive instruction in the theory and methods of teaching reading would be provided together with an extensive practicum experience. Students successfully completing this one year program would earn a diplona from the technical institute or community college.

The cooperative arrangement is advantageous to all three institutions involved. For the public schools, the students participating in the practicum provide immediate and free instructional assistance. With the

high cost to the schools of four year degree graduates who are certified to teach a long term advantage is the availability of RTT's who give the school system an econonical alternative for improving reading instruction. The project was submitted April 10, 1975, and approved August 1, 1975, to start operation immediately. The total cost for the two-year project was $111,666, with about 40% of the funds being a Federal/State contribution and 60% of the funding a local contribution.

II. Organization of the project

The project involved forming a cooperative relationship between the University of North Carolina at Greensboro, Guilford Technical Institute, and the Greensboro City Schools. The Greensboro City Schools provided the placements for the practicum aspect of the training, and offered employment opportunities to graduates of the program. Guilford Technical Institute participated by providing a home for the program, supplying instruction within "core" coursework, and offering the diploma. UNC-Greensboro organized the reading education courses, provided the director, and provided graduate students to help supervise the internship experience and teach some of the specialized reading courses at Guilford Technical Institute. Generally the course work was developed at the technical institute and the practicum experiences were supervised from the university. The public schools received free help in reading instruction, the technical institute received additional students and a new program, and the university obtained an excellent laboratory for the training of graduate students in education who were specializing in the area of reading.

The project was to operate for twenty-four months with two, one-year cycles. Two groups of RTT's would be trained, with the second year of

the project providing an opportunity for the evaluation of the classroom work of those trained during the first year. The second year of the project would also give the project staff time to document and disseminate the results of their efforts.

RIT's worked with the children in small groups. The typical schedule would include five children in a group, and five to seven forty-five minute groups a day. This same schedule would be repeated each day so that all of the children would receive the special reading instruction five times a week. Specific arrangements varied from school to school.

III. Objectives of the program:

The specific objectives of the project as stated in the proposal were as follows:

1. Train diploma students at a TYI to effectively deal with those children in our local education agency (LEA) who are lagging dramatically in reading.

2. Elevate the cognitive and effective reading skills of children served by LEA.

3. Train doctoral-level University students to deal, in a more viable way, with the instructional programs of the TYI and an LEA.

4. Prepare doctoral-level University students to deal with reading problems facing public school administrators.

5. Generate a disseminatable model for training teaching technicians throughout the State and nation.

6. Generate a discriminatable monograph detailing how three agencies (TYI, LEA, University) may explore consortia resolutions to common problems.

IV. Evaluation Design:

Some elements of a possible evaluation were outlined in the proposal. Specifics of the design were developed during the second year when the evaluation was identified. These specifics involved collecting data to determine if objectives one and two were achieved, developing and administering questionnaires to provide information on objectives three and four, and verifying that dissemination materials had been completed as specified in objectives five and six. Objective one: "We will seek to train diploma students at a two year institute (TYI) to effectively deal with those children in our local educational agency (LEA) who are lagging dramatically in reading." Objective one will be evaluated by presenting a table which will show the number of students who were trained as RTT's. Included in this table will be the federal cost for training each individual student.

Program effectiveness will also be measured through the self-reports of RTT students. They will be asked to report their teaching capabilities in the following skill areas: letter recognition, letter rounds, blends, vocabulary growth, and comprehension. In addition they will report on their progress in knowledge of reading resources and their level of comfort in classroom work. The effectiveness of the program in developing RTT's will be rated by school principals, and project personnel in questionnaire number 3. The questionnaires are all presented in the appendix. All questionnaires contain a four point rating scale (1-4), usually ranging from poor to excellent

Objective two: "We will seek to elevate the cognitive and affective reading skills of children served by the LEA." The evaluation for objective two will also be used to determine if the RTT's were able to deal effectively with their students.

For purposes of the project, the individual teachers in project schools were allowed to nominate children to be tutored by the RTT's. The criteria which was used to screen individual children was that they must not be intellectually talented.

To determine whether diploma students have been effective (objective one) in elevating (objective two) the cognitive reading skills of the children they worked with, the CTB/McGraw-Hill Comprehensive Test of Basic Skills was given to the children in October and again in April. The following areas were tested at each grade level:

First grade	Second grade	Third grade
Letter sounds	Vocabulary	Vocabulary
Word recognition (I & II)	Reading comprehension sentences	Comprehension
Comprehension	Reading comprehension passages	

Using the CTBS pre-test results, learning rates for reading will be computed. Using these rates, projected achievement gain will be computed for the five months which is the test interval in the Greensboro Public Schools. The data will be examined in two ways. First, the project criteria was that the "average child" would make one month of progress for each month in the program; ie. was five months of progress in reading achieved at each grade level. Secondly, the projected progress will be compared with the actual progress. If the project is helping the LEA students, their progress should be greater than the expected rate based on previous achievement.

The affective progress of the students was measured with a questionnaire filled in by the homeroom teacher of a randomly selected sample of the school children. The teachers were asked to rate the progress of the students in the areas of attitude toward reading, attitude toward school, and on their progress in interpersonal relations.

Objective three: "We will seek to train doctoral-level university students to deal in a more viable way with the instructional programs of a TYI and LEA." This objective will be evaluated through self reports from project personnel and also from current RTT's. Using questionnaire number 8, RTT's will be questioned about the effectiveness of the doctoral level university students (graduate students) in both the supervisory setting of the public schools, and in their classroom teaching. Project personnel will rate each other on improvement, over the course of the year, using questionnaire number 7. They will also rate the project using questionnaire number 3. Principals and participating public schools will be asked to return both questionnaires number 7 and number 3.

Objective four: "We will seek to prepare doctoral-level university students to deal with reading problems facing public school administrators." The achievement of this objective will be essentially covered by the same questionnaire used for objective number three. Project personnel and the principals in the schools will be asked to rate the growth of the graduate students on questionnaires number 3 and number 7. These instruements probe the following areas:

a) Awareness of reading problems facing public school administrators,

b) Development of a variety of ideas to use in working effectively with the reading problems, and

c) The practical applicability of the ideas developed by graduate students.

Objective five: "We will seek to generate a disseminatable model for training teaching technicians throughout the state and nation," and

Objective six: "We will seek to generate a disseminatable monograph detailing how three agencies (TYI, LEA, and University) may explore consortia resolutions to common problems."

The evaluator will examine the above materials and report on the progress which has been made on each document. These documents will be attached as appendices to the evaluation report.

V. Presentation of data

Section four, "Evaluation Design," sets out the general format which will be followed in presenting the data. Project objectives will be taken one at a time starting with objective one.

Objective one: "We will seek to train diploma students at a two year institution (TYI) to effectively deal with those children in our local education agency (LEA) who are lagging dramatically in reading." Table I presents the number of students who graduate from Guilford Technical Institute with a RTT diploma. The program started with nineteen and twenty students respectively over its two years, and each year fourteen students graduated. The figures in parenthesis show the federal funds that supplemented the program on a per student basis. These funds provided administrative time for the project, stipends for graduate students, and reading materials for participating Greensboro Public Schools.

Insert Table I about here

Table II presents the data from questionnaire number two in the appendix. The object of the questionnaire was to determine how the RTT students felt about their training, particularly in reading skill areas. The rating scale used runs from one to four, with four indicating excellent.

Overall, the group seemed to feel very good about its capability, particularly in the areas of teaching letter recognition, and in feeling comfortable in classroom work. Somewhat lower averages of 3.3 and 3.4 were computed for "Finding Reading Resources and Vocabulary Growth" respectively.

Insert Table II about here

Table III, "Staff and Principal Rating of the Program," confirms the RTT self-rating regarding skills in question 2B. However, regarding overall teaching effectiveness in question 2C, ratings of 2.8 and 3.0 are given which are some of the lowest ratings achieved in any category.

Insert Table III about here

Objective two: "We will seek to elevate the cognitive and affective skills of children served by LEA." Based on total raw scores, grade equivalents were found using the conversion tables in the test manuals. The results presented in Table IV show that the grade equivalent gain for first graders was 0.30, for second graders 0.54, and for third graders 0.76. The gains in second and third grade meet the requirement of one month of gain for each month in the program.

Insert Table IV about here

Table V shows the projected progress as it is computed from the initial learning rate. In each case the actual progress greatly surpasses the projected progress. However, it should be noted that the learning rate and projected progress for the first grade are unreasonably low.

Therefore, even though the actual progress, 3.75 months in a five month period, exceeds the expected progress by a multiple of three, the progress on the part of the first graders was certainly not outstanding.

Insert Table V about here

The affective progress of the students (see Table VI) was between good and excellent as judged by their homeroom teachers. Attitude toward reading seemed to improve at all grade levels and at the third grade level an average rating of 3.4 was given for improved relationships. A somewhat lower average rating of 3.1 was given for first graders in improved relationships, and for second graders in attitude toward school.

Insert Table VI about here

Objective three: "We will seek to train doctoral-level university students to deal in a more viable way with the instructional programs of a TYI and LEA." The ratings given the doctoral-level (graduate) students regarding their improved ability to deal with TYI and LEA instructional programs are presented in Table VII.

Insert Table VII about here

The principals seemed to feel, shown by three rating averages of 3.6, that the graduate students were most capable in dealing with LEA instructional programs. Project personnel felt they were strongly improved in their awareness of LEA problems, and in their variety of ideas for working with the reading problem. Their rating of 3.1 on question three seems to indicate that they were not feeling quite as positive regarding the practicality of their ideas. On Table III,

question 2D (a) received staff and principal ratings of 3.7 and 3.3 respectively, whereas 2E (b) received ratings of 4.0 and 3.6. These results are consistent with the earlier ratings in that they are between good and excellent, and that they seem to show a little more strength and confidence in the area of administration and communication rather than immediate practical help. The ratings in Table VIII show that the RTT's were most pleased with their graduate students (3.8 ratings), and only the area of reading resources (see Table II, question 1F) shows up slightly lower with a 3.7.

Insert Table VIII about here

Objective four: "We will seek to prepare doctoral-level university students to deal with reading problems facing public school administrators." The data covering achievement of this objective comes essentially from questionnaires number 3, number 7, and number 8 and was described in the previous section. Table VIII shows the RTT's felt the graduate students were prepared to deal with reading problems facing public school administrators, and Table VII presents the data from questionnaire number seven which again confirms the confident feelings about the graduate students. The ratings range from 3.1 (Table VII, question 3) on practical application of ideas given by the project staff to the 3.6 ratings given in all categories by building principals.

Objective five: "We will seek to generate a disseminatable model for training RTT's throughout the state and nation." and Objective six: "We will seek to generate a disseminatable monograph detailing how three agencies (TYI, LEA, and University) may explore consortia resolutions to

common problems." The project director provided the evaluator with an initial draft of a document which addressed both objective five and objective six. At the current time (June, 1977), no additional documents have been published or completed in fulfillment of this objective.

VI. Evaluation Weakness

One weakness of the current design is the overreliance on questionnaire feedback. Such ratings tend to be high, and this project was no exception with only one average rating going below the "good" level of 3.0. It probably would have been more profitable to spend some of the time interviewing RTT's and reducing the number of questionnaires. Secondly, there were a large number of missing cases in the data. This is impossible to control after the fact, but starting the evaluation in the spring of 1976, instead of 1977, could have helped reduce this problem.

While the evaluator has a significant amount of experience in working with computer programs, the choice of the SPSS program to process the data was a mistake. Because the evaluator was not previously familiar with the SPSS format, an unexpectedly large amount of time was taken debugging the program.

V. Discussion and Conclusions

The RTT's who returned questionnaire number 1 seemed to feel pleased about their training. The reading class taught by the graduate students, the classroom experiences, and the audiovisual class were favorites of the RTT's. Their concerns were for a slower entry into the classroom, and in general a longer, less concentrated program. Some students felt that certain core courses at the TYI needed improvement.

The concern regarding a slower, better supervised coordinated entry into the classroom, and a longer program has also been emphasized by the staff. Part of this concern was generated because of the question as to whether the average TTI student could be trained for such a responsible position in a short time. This raises the more basic question as to whether the overall problem of the reading lag can be answered in a significant way with such graduates. Are more highly trained, more qualified people what the problem really demands? The students who entered the program were all individually screened, and had to pass a reading test to be admitted.

The program has also been seen as a good developmental opportunity for the TTI students. One example of this is the increase in their personal reading scores as a result of their participation.

The cognitive achievement levels of the average LEA project student was adequate as judged by the sample studied. Thirty to forty percent of the project data is missing, and speculation as to what it might have added would not be helpful. The homeroom teachers in general felt most positive about what was happening with their students:

"Shawn's reading comprehension has greatly improved. He has more self-confidence."

"Paul has made a complete turn around since the beginning of school. He (has) taken a great deal of interest in all aspects of education. A lot of it is due to . . . our reading technician."

"I feel that this program has helped Michelle a great deal. Before she entered the program she had a problem just writing her name."

"Give us more technicians!"

The above is just a small sample of the positive remarks written by Greensboro Public School teachers regarding the help their students received from RTT's.

The graduate students were a success as judged from the many compliments given to them. It seems that some questions that might arise from the "practical" nature of their work can be traced to the nature of the process of learning to read. It is a multivalent problem which cannot be solved by a single solution. Some RTT's, and many of the rest of us constantly learn and relearn this lesson. One reading resource will not work for everybody.

The number of graduates in each year of the program shows that attrition was a problem. Although a strong admissions procedure was followed, it would be necessary for adopting institutions to carefully screen and orient applicants. Increasing the length of the program will obviously help, as many of the students dropped out because of the concentrated work load.

The final point grows out of the evaluation of objectives five and six. Some administrative tasks which would have facilitated the smoother operation and dissemination of the project were not accomplished. Dissemination certainly would have been facilitated with printed and published materials explaining the details of the program. The unfinished document I received makes a good start in this direction, but specific curriculum suggestions must also be included as well as organizational concerns. The director stated that one quarter time was not enough for the administration of the project. The graduate students are already being exploited, often putting in forty hour weeks of professional services for the small stipends they receive.

Administratively, time needs to be available to accomplish the following tasks. First, a need for additional communication/coordination between project personnel and the three institutions was felt. Secondly, an expanded orientation program in the schools is needed. During the second year of the project this was improved. However, it needs to expand to include 1) a more thorough introduction of the RTT's to the schools, and 2) a thorough orientation of both teachers and principals to the role of the RTT's.

In conclusion, many important lessons have been learned in this project. An adequate training program was developed in cooperation between a university and TTI. Children in the LEA received substantial help in their reading, and graduate students were given extensive leadership and teaching opportunities. The completion of the dissemination materials will assist others to gain from the Reading Teaching Technician Project.

I would like to express my appreciation to the project staff for their cooperation with this evaluation effort. They were most helpful and kind in helping me obtain and distribute materials, and in answering numerous questions.

Appendix

All interns I and II

READING TEACHING TECHNICIANS PROJECT #2

Questionnaire for intern _____

RE: Personal Growth

1. Please rate your capability in each of the following teaching areas:

	Poor	Fair	Good	Excellent
A. Letter recognition	1	2	3	4
B. Letter sounds	1	2	3	4
C. Blends	1	2	3	4
D. Vocabulary growth	1	2	3	4
E. Comprehension	1	2	3	4
F. Finding reading resources	1	2	3	4

2. Do you feel more comfortable in your classroom role as a RTT than you did at the beginning of the year?

no change	a little	improved	greatly improved	
1	2	3	4	(classroom comfort)

3. Overall reaction:

A. What are the three areas in which the program has been most adequate as far as you are concerned?

B. What are the three areas in which the program should be improved?

Program: all graduate students and administrators

READING TEACHING TECHNICIANS PROJECT #3

Questionnaire for Graduate Students and Administrators

RE: Growth during the program

1. In which two ways has the program been most helpful to you (open ended, from financial, skill building to personal growth)??

2. Rate the effectiveness of the program in the three areas below, and comment if you wish.

	Poor	Fair	Good	Excellent
A. Human development for TYI students	1	2	3	4
B. Developing knowledge of skills for TYI students	1	2	3	4
C. Developing effective RTT for teaching	1	2	3	4
D. Training graduate students for Supervisor: (intern work)	1	2	3	4
Program coordination: (institutional problems)	1	2	3	4
E. Developing a model for training RTT's	1	2	3	4
F. Developing a model for consortia problem resolution comments:	1	2	3	4

3. List two ways in which you feel the program could be improved.

Public school students

READING TEACHING TECHNICIAN PROJECT #6

Questionnaire for homeroom teacher _____ (teacher)

RE: _____ (public school student)

1. Has he/she progressed in the course of the special reading instruction through improved attitude toward:

	Regressed	Slight Regression	Progress	Greatly Improved
A. Reading	1	2	3	4
B. School	1	2	3	4
C. Interpersonal relations	1	2	3	4

2. What are two specific ways in which you feel:

A. The program has helped him/her:

B. The program should be improved.

Graduage Students and Administrators

(round robin)

Reading Teaching Technicians Project 47

Questionnaire for administrators _____

RE: _____ (Graduate student)

1. Do you feel she is more aware of the problems in the area of reading which face public school administrators than she was at the beginning of the project?

no change slightly improved much more aware

1 2 3 4 (awareness)

2. Do you feel she has developed a variety of ideas to use in working with the reading problems in the public schools over the course of this school year?

no change a few variety wide variety

1 2 3 4 (variety in ideas)

3. Do you feel her ideas have improved with respect to their practical application to the public school reading problem over this past school year?

no change a little improved greatly improved

1 2 3 4 (practical ideas)

4. Overall reaction:

A. Three strengths of the program in helping her deal with public school reading problems:

B. Three areas in which the program needs improvement:

RTT's 1976-77

READING TEACHING TECHNICIANS PROJECT #0

Questionnaire for intern _____ (first year)

RE: _____ (Graduate student)

1. Do you feel she has grown in familiarity with resources which are helpful to you in teaching reading?

no change a little improved greatly improved

1 2 3 4 (resource familiarity)

2. Do you feel she is more comfortable working in our cooperative instructional program (involving GTI, Greensboro Public Schools, and UNC-G) than she was at the beginning of the year?

no change a little improved greatly improved

1 2 3 4 (comfort)

3. Is she more helpful to you personally than she was at the beginning of the year when you have questions in the area of reading instruction?

no change a little improved greatly improved

1 2 3 4 (personal help)

4. Is she able to plan class lessons for the interns which are more helpful than the work she planned at the beginning of the year?

no change a little improved greatly improved

1 2 3 4 (class teaching)

5. Do you have any other evaluative comments?

Table I

Number of Students Trained and Federal Cost

Per Student

Category	1975-76	1976-77
Applications	50[1]	50[1]
Applicants Interviewed	30[1]	40[1]
Students Starting Program	19 ($1290)[2]	20 ($895)[2]
Graduates	13 ($1760)[2]	14 ($1280)[2]

1 Approximate Figures
2 Federal Cost Only

Table II

RTT Evaluation of Training They Received[1] (N)

Area	RTT 1975-76 (9)	RTT 1976-77 (14)	Total (23)
Letter Recognition	3.6[2]	3.9	3.7
Letter Sounds	3.6	3.4	3.4
Blends	3.2	3.7	3.5
Vocabulary Growth	3.4	3.5	3.4
Comprehension	3.2	3.7	3.5
Finding Reading Resources	3.2	3.5	3.3
Classroom Comfort	3.8	3.9	3.9

1 Refer to questionnaire number 2 in the Appendix
2 Rated on a four point scale with 4 being excellence

Table III

Staff and Principal's Rating of the Project

Question*	Staff (3)	Principals (6)	Question	Staff (3)	Principals (6)
2A	3.7	3.5	2D	a 3.7	3.3
2B	4.0	3.5	2E	b 4.0	3.6
2C	2.8	3.0	2F	3.0	

* The numbers refer to questionnaire number three in the appendix.

Table IV

Pretest and Gain Scores

Grades 1-3

Grade	Pretest N	Pretest Raw Score	Pretest Grade Equivalent	Gain N	Gain Raw Score	Gain Grade Equivalent Gain	Gain Grade Equivalent Total
First	73	21.5	0.25	63	7.0	0.38*	.625
Second	95	23.1	1.6	75	20.7	0.54**	2.14
Third	29	19.8	1.82	23	12.0	0.76**	2.58

* Below project goal

** Meets or exceeds project goal

Table V

Projected Progress and Actual Progress

Grade	Entering Learning Rate[1]	Projected Progress[2]	Actual Change
First	.25/1.1 = .23	.23 x .5 = .12	0.38*
Second	1.6/2.1 = .76	.76 x .5 = .38	0.54*
Third	1.82/3.1 = .59	.59 x .5 = .30	0.76*

1. Rate is in terms of grade equivalents/year
2. Progress is in terms of grade equivalents over the five months test period based on entering learning rate.

* Actual change exceeds projected progress

Table VI

Affective Progress of LEA Students[1] (n)

Grade	Improved Attitude Toward: Reading	School	Relationships
First	3.6[2] (26)	3.3 (21)	3.1 (21)
Second	3.4 (35)	3.1 (34)	3.2 (33)
Third	3.5 (16)	3.3 (16)	3.4 (16)

1. Refer to questionnaire number 6 in the appendix.
2. Rated on a four point scale with 4 being excellent.

Table VII

Administrative Evaluation of Graduate Student Growth

During the Project (n)

Question*	Average Rating: Principals (7)	Project Personnel (16)
1	3.6	3.4
2	3.6	3.4
3	3.6	3.1

* The numbers refer to questionnaire number seven in the appendix.

Table VIII

RMT Evaluation of Graduate Student Achievement (n)

Question *	Average Rating (10)	Question	Average Rating (10)
1.	3.7	3	3.8
2.	3.8	4	3.8

*The numbers refer to questionnaire number eight in the Appendix.